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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/284,935	06/01/99	TAKEBE M	211A-2828-PC

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EXAMINER	
AFREMOVA, V	
ART UNIT	**PAPER NUMBER**
1651	9
DATE MAILED:	01/31/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
09/284,935	Takebe et al.
Examiner	**Group Art Unit**
Vera Afremova	1651

☒ Responsive to communication(s) filed on *Jun 1, 1999* .

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *1-8* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *1-8* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____ .

☒ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____ .

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

DETAILED ACTION

Claims 1-8 are pending and under examination.

Claim Rejections - 35 U.S.C. § 112

Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims are indefinite with regard to all active steps because they are not particularly directed to a sequence of active steps but rather to overlapping or simultaneous events. It is unclear whether a step of inoculating encompasses mixing koji mold and grain or whether this step is intended for a fermentation which results in some fermented or modified product. The phrase "to effect koji preparation" does not recite any active process but only some intend for a future fermentation. Thus, the next step directed to addition of water to "a resultant" is indefinite because it is unclear what is "a resultant" and when actually water is added. The effective koji preparation or fermentation is reasonably expected to require some water. Thus, it is unclear when and how much of water is added. Further, it is unclear what substrate is actually hydrolyzed. When and how is phytic acid removed? Would not a fermentation of grain with koji mold result is the reduction of phytic acid amounts and, thus, removal of phytic acid?

All phrases reciting "beneficial microorganisms" are indefinite and confusing. For example: it is unclear what is the difference between "beneficial microorganisms" and "koji mold" in claims 1-3 , 5 and 6. Both seem to be beneficial. The grow of all microorganisms including koji mold is

believed to be promoted as claimed. And "beneficial microorganisms" are present in the resultant (claim 3, line 2, for example) . Further, with respect to claims 4, 7 and 8 which distinguish between koji mold meaning fungi and beneficial microorganisms being yeasts and lactobacilli it remains unclear where "beneficial" lactobacilli or yeasts are coming from. Have they been inoculated prior to "koji" fungi? Were they present in the grains? Would be all grain reasonably expected to be naturally contaminated with, for example, lactobacilli? With regard to the "added beneficial" it is unclear whether they are added to a mixture of grain and fungi or whether they are added to the already fermented product with reduced amount of phytic acid. The criticality of "removal" of phytic acid for the present invention is not clear as claimed and as disclosed. For example: Fig. 2 does not teach any actual step of "removal" of phytic acid. The applicants' particular examples (pages 17-21) disclose milk fermentation rather that grain fermentation or addition of milk rather than water and beneficial microorganisms.

Claim 2 is indefinite because it is unclear what is "resistant" starch or what makes starch to be "resistant". How to select a "resistant" starch? Would be any difference between the claimed resistant starch and starch as inert absorbent?

Claim Rejections - 35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 7-23725 [N].

Claims are directed to a process and to a product obtained by the process comprising steps of inoculating grains with koji mold, adding water and removing a phytic acid contained in the grains. Some beneficial microorganisms are present within the whole preparation.

JP 7-23725 [N] teaches a process and a product obtained by the process comprising steps of inoculating grains with koji mold, adding water to bring the moisture content to levels as to enable proliferation of koji mild and fermentation of grains until phytic acid is sufficiently reduced or removed (abstract). The cited method teaches all active steps as claimed and, thus it inherently results in the possession of identical product as claimed. Some beneficial microorganisms are reasonably expected to be present within the whole preparation since the initial soybean refuse was not sterilized but only steamed and it was further fermented to promote proliferation of microorganisms as disclosed by the cited patent.

Claims 1, 3-8 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,308,284 [A] in view of JP 7-23725 [N].

Claims are directed to a process and to a product obtained by the process comprising steps inoculating grains with koji mold, adding water, removing a phytic acid contained in the grains and adding beneficial microorganisms. Some claims are further drawn to beneficial microorganisms being yeasts of lactobacilli.

US 4,308,284 [A] clearly teaches a process and a product obtained by the process comprising steps of inoculating grains with koji mold, adding water and adding beneficial microorganisms such as yeasts of lactobacilli (abstract; col.7, lines 5-30; col.3, lines 61-64; col.4, lines 44-46; col.5, line 21). The step of removing a phytic acid contained in the grains is inherently present in the method of '284 tn in view of the teaching by JP 7-23725 [N] since both patents disclose fermentation of the same grains (soybeans) with the same koji molds as claimed. Therefore, the cited method as disclosed by '284 comprises identical steps as the presently claimed method and, thus it results in the possession of identical product as claimed particularly in view that the cited patent teaches a promotion of growth of beneficial yeasts and lactobacilli (col.5, line 26).

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,308,284 [A] taken with JP 7-23725 [N], JP 3-19686 [O], Remington [U] and Merck [V].

Claims are directed to a process for preparing a beneficial microorganism propagation promoting material and to the beneficial microorganism propagation promoting material obtained by the process encompassing grain fermentation with koji mold and optional addition of beneficial

microorganisms such as yeasts of lactobacilli. Some claims are further drawn to incorporation of starch into the material.

The primary references are relied upon as explained above. They are lacking a particular disclosure of incorporation of starch into a final material fermentation product. The secondary references Remington [U] or Merck [V] teach starch as inert absorbent for any pharmaceutical preparations or suitable for food industry.

Another secondary reference JP- 3-19686 [O] is relied upon for demonstration of a material obtained from grains fermented with koji molds which is useful for promoting grow of lactic bacteria during milk fermentation.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to use a product obtained after grain fermentation with koji molds for proliferation of lactic bacteria with a reasonable expectation of success in promoting growth of lactic bacteria since the similar use have been taught or suggested in the prior art for lactic bacteria in milk fermentation [O]. Further, the addition of starch to a final active material or to a fermented material intended for food or pharmaceutical products is known in the art [U, V]. Thus, the claimed invention as a whole was clearly prima facie obvious, especially in the absence of evidence to the contrary. The claimed subject matter fails to patentably distinguish over the state art as represented be the cited references. Therefore, the claims are properly rejected under 35 U.S.C. § 103.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vera Afremova whose telephone number is (703) 308-9351. The examiner can normally be reached on Monday to Friday from 9:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn, can be reached on (703) 308-4743. The fax phone number for this Group is (703) 308-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Vera Afremova, Ph.D.

Art Unit 1651

January 25, 2000.

SANDRA E. SAUCIER
PRIMARY EXAMINER